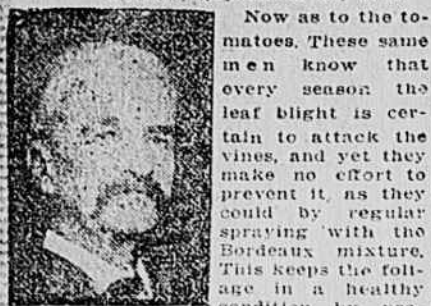


WITH THE FARMERS

By Prof. W. F. MASSEY

Friday, September 26, 1913.



Now as to the tomatoes. These same men know that every season the leaf blight is certain to attack the vines, and yet they make no effort to prevent it, as they could by regular spraying with the Bordeaux mixture. This keeps the foliage in a healthy condition by preventing the growth of the fungus that destroys the leaves. The one field I saw in my ride yesterday that has been sprayed is now, in the middle of September, in the most healthy and thriving condition, and the fruit is perfect, and the owner is getting an extra crop for it because there is no waste. And yet right alongside of him there are fields, red all over with tomatoes and not a leaf on the plants, and the fruit is hardly worth the picking. The fact that there is such an abundance of fruit on some of these leafless fields shows that so long as the foliage remained the plants were doing well, but when the foliage was destroyed the pile of tomatoes merely turned a sickly red with yellow ends that have to be cut off, and what is really left is of the poorest quality. Now this is just what is the matter with your tomatoes. The leaf blight has destroyed the foliage, and it could have been prevented by spraying before the disease appeared. But most growers, seeing their plants growing well and forming fruit well, are apt to imagine that all is well till the blight hits them, and then it is too late to do anything. My tomatoes that were started early and forwarded in glass cases were early, but they are still making good fruit, and the foliage is green and healthy. In these days we can only have good products of anything by using means to prevent the fungus diseases and insects that eat experience has shown, I am apt to attack our plants, and we must prevent them rather than try to cure them when they have gotten a strong hold on the plants.

It is the poor, neglectful, average farmer that cuts down the average of all our crops. Professor W. W. Tracy, of the Department of Agriculture, once stated that he had grown tomatoes at the rate of thirty-six tons an acre. I never got near that amount in acres, and I doubt that any planter has made anywhere near that over acres. It is easy to figure out a large yield per acre from a small plot of great production, but to carry the work actually over the acres is a very different matter. But with good soil, well-grown plants and good cultivation, any farmer should be ashamed to make less than ten tons an acre of tomatoes. There are some who do it and more, but there are many others who make so little that the general average is less than four tons an acre. I have treated this at length, because the tomato pack in Maryland and Virginia is getting to be an important thing to growers and canners, and while the total pack is immense, the majority of the growers are not making a cent of profit because of their own poor farming and neglect of the health of their plants.

Borer in Corn.
"I am sending you some cornstalks which you will see are affected by a worm of some sort. My corn has a fair growth, but one-half of it has no ears on it, and there are many of these worms in it. Can you give me any information? The stalks are attacked by the larger corn borer, or what is called the sugarcane borer. This is usually worse on newly-cleared swamp land, and gradually disappears as the land is drained and cultivated. The only thing that can be done is to get the stalks as early as possible, and burn them, and to burn the wild grass around the field. A rotation of crops will do much to prevent the attack of the borer, and late-planted corn is less liable to be attacked than early planted. Your failure to get ears shows that you need a better strain of corn for seed. Barren stalks, borer or no borer, are hereditary, and come from badly-bred seed. A barren stalk in the field makes plenty of points in the stalk and sets the ears all around it and makes the tendency to make more barren male plants. You should get a better bred variety of corn, and then go through the field and remove the stalks and remove the green tassels from every stalk that shows no ear, and in this way you can gradually breed out the tendency to barrenness. But if you have a good rotation of crops and do not plant corn after corn, but always have a clover seed to turn for corn, you will have little trouble from the borers.

Young Apple Trees the First Season.
A friend who is interested in large apple orchards in Western Maryland wrote to me some time ago asking my opinion as to a practice he has seen during the summer in orchards recently planted. Many of the trees had started surplus growth, and the owners had men in the orchards during the summer pruning of this. My correspondent thought that this was wrong, and wanted my opinion in regard to it. I fully agreed with him that summer pruning of young trees or old is a check to growth.

When an apple tree is planted—and I would never plant one more than one year old—and the top cut back, and the buds selected that are to form the head, it is all right to rub off all other buds before they expand and make a number of shoots have started. I would let them alone. There is an idea among many that the surplus growth is drawing on the roots, when, in fact, it is making roots. Roots are the product of stem and leaves, and the more leaves there are in healthy condition, the greater the root development will be, for all the material for growth, whether of top or roots, is elaborated in the leaves and sent down to make more root growth, and if the pruning is done during the summer, there is a check to the growth of the top and roots. But if all the growth is allowed to remain, there will be a stronger root development, and after the tree is dormant, the surplus shoots may be removed, and the stronger growth of the remaining branches in the spring, as the more the roots are

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developed, the more food they can collect in the soil water.

The old notion still prevalent among people who have not made a study of plant growth is that the sap rises in trees in the spring and runs down in the fall, while, in fact, there is no such circulation in plants. The so-called sap that rises from the soil in spring is not sap, but simply water from the soil, in which food for the tree is dissolved. This water rises with the development of the leaves, and in the leaves the combination of the plant food from the soil and the much larger part that comes from the air in the shape of carbon taken in by the green matter of the leaves, is made, and the sap or material for growth of top and roots is elaborated and sent to all parts where growth is going on, to roots as well as tops. Therefore, there is a descent of the sap as well as a rise going on all the time that the growing season causes it, and in the fall there is merely a cessation of active growth, and a storage of formed plant food made for the early start in the spring. We tap a sugar maple tree as the so-called sap rises and get sugar from it. But that sugar did not come up from the soil with the rise of the soil water; it was formed in the season before and simply is dissolved by the rise of the soil water. When a plant starts to grow, the first thing one can discover, being made is starch. From this starch, the living matter, the nitrogenous part of the plant, makes all the woody material, the sugars, acids, oils and all the other organic materials in the plant, and all the other things that purpose gets into the plant through the leaves and none from the roots. Hence, the importance of healthy leaves. Destroy the leaves with the cedar rust or blight of any sort and the apple tree cannot make perfect fruit. Leaves are the parents of roots, not roots of leaves.

A Farm Demonstrator.
"I am in the demonstration work in our county (Tidewater, Va.). I read your columns in The Times-Dispatch, and find them helpful and instructive. I am starting with the idea that if I could convince the farmers of my county that it is not necessary to buy nitrogen for general farm crops, I would seem uphill work with some of them, as the results are before their eyes and they will not see. What is your idea of the corn-club boy? Should he be taught the same thing? Instead of side dressing his corn with mixed fertilizers, should he not be taught the value of getting his nitrogen from legumes? I am afraid that the idea in some instances of getting a large yield regardless of cost has been taught rather than that of making the most profit per acre.

"I read an article some time ago in which you state that you had been able to make more corn with rows four feet apart and two feet in the rows than in any other way you have tried. Do you mean one stalk in a hill at this distance or more? I have not given your county, since I do not care, and you may not care to be identified in the paper. The extract of your letter will be plain to you. It is hard to get farmers anywhere to understand that either as manure or direct, or through their feeding, and the return of the manure to the land, will enable them to entirely do away with the need for buying nitrogen in a fertilizer. Many imagine that the taking off of the land will enrich it, like the farmer in Alabama, who wrote to me that what I had been saying about peas improving the land was all nonsense, for he had taken a crop of peas off a piece of land for twelve years in succession, and it got so poor that it would not grow peas at all. What you need to impress on the farmers is the value of legumes as stock feed and the making of rich manure to go back on the land that produced the crop. I am often asked if it will not help them more to plow peas under than to take them off in hay. Certainly this will return to the soil more nitrogen and organic matter, but, as a matter of farm economy, it is more profitable to feed the crop than to use it as manure direct, since we can recover in the droppings by far the greater part of the nitrogen, and can certainly make a profit in the feeding. A crop of pea vine hay of two tons an acre is worth \$16 a ton for feeding, and I cannot see the economy of burying \$16 worth of feed when I can recover \$18 per cent of its manurial value. Under certain conditions, as in the start in the improvement of a very poor piece of land, it may be well to turn all under, in order at once to get the better soil material into the soil rapidly. But when once we have soil in a fairly good heart, I think the feeding is far more profitable. One of the most successful farmers in Maryland wrote me that after adopting a better strain of tree-rotation on a farm that formerly made fifteen bushels of wheat an acre, he had for twenty years averaged forty bushels an acre, and during that time had used no fertilizer except acid phosphate, and that on the 25th of April, and his corn crops on manured clover seed had increased from thirty bushels to seventy-five bushels an acre. Some years ago in one of the best wheat-growing counties of Maryland, at a farmers' institute, a New York man made an address on fertilizers and their application, laying great stress on the making of a complete fertilizer.

After he was through I told him that he did not probably realize that not one farmer in ten could afford to buy a complete fertilizer, and that 200 in his audience had no more than twenty dollars in fertilizer for twenty or more years, and had seen their land all kinds of ways increase through the use of legumes in a short rotation. He was rather astonished at the statement, but the farmers confirmed what I said. The main difficulty is in getting farmers to adopt the feeding of live stock, for some live stock feeding is at the very foundation of all rational farm development. It is right in the idea that the clubs have been run more for the purpose of endeavoring to get a big yield an acre than for growing corn profitably. Important thing is growing corn, or any other crop, is to know it at the least cost per bushel; that a crop of 100 or more bushels an acre that costs that many bushels of wheat is a poorer crop than fifty bushels grown at a cost that leaves a good profit. Only millionaires can afford to farm regardless of cost, like the steel trust magnate, who is building a poultry-house to cost \$15,000. His chickens will probably cost him \$5 apiece. I mentioned the distance in corn for the Southern Poultry sort that sucker freely and often make as much corn on the suckers as on the main stalk, and one stalk in a place is an abundance. With different corn I would put the plants a little closer, crowding two or more in a hill, as is common where check-rowed corn is grown.

B. B. FRATERNITY MAKES DEMANDS

Seeks to Protect Players Who Have Served for Ten Years or More.

Detroit, Mich., September 25.—Members of the Detroit American League baseball team here to-day confirmed a report that the Baseball Players' Fraternity has drafted a series of demands for presentation to the owners of major league clubs. They also will be submitted to the National Commission, with the request that they be made part of the laws governing organized baseball.

Four important demands are under consideration it is understood. They are:

No player who has been a member of a major league team for ten years shall be given other than his unconditional release.

No player who has been a member of a major league club's pay roll until July shall be released to the minors unless waivers are obtained from the sixteen clubs of the American and National Leagues.

A major league club owner shall be prohibited from carrying a player who has an opportunity to play on another major league club until the late months of the season, thus taking advantage of the time when the teams are carrying many recruits to send the player in question to the minors.

Many major league ball players are reported to be willing to agree to release to future contracts unless the demands of the fraternity are accepted.

HILLSTREAM COPS FOR HIS BACKERS

Hayre de Grace, Md., September 25.—The Bowery boys made an old-fashioned slaughter at Hayre de Grace on Roxey Angarola's Hillstream. Roxey purchased the daughter of Chatain from John Sanford at Saratoga, and since has been laying away with the big coup in mind. Last evening, however, sent word to the Bowery boys, and those that didn't get here from the boardwalk wandered in the handbooks. So many people were in on the know that a big commission came back to he not be taught the same thing. Hillstream broke on her toes and walked home.

BOWLING

The All Stars defeated the Athletics three games on the Newport Alley last night in a pretty contested series. Good scores were made by both sides. The scores:

All Stars.	2	3 Totals.
Bell	182	197
Suterlin	196	194
Overmann	202	191
Tucker	189	172
	769	756
Athletics.	2	3 Totals.
Whitman	190	267
Flinn	174	189
Mingo	159	145
Burnette	171	114
	694	705

ROANOKE DAY AT FAIR.

Good Racing Pulled Off Before Record-Breaking Crowd.

[Special to The Times-Dispatch.]
Roanoke, Va., September 25.—To-day was Roanoke day at the fair here, and a record for attendance was established, there being 49,000 paid admissions. The fair closes to-morrow. To-day's race results follow:

First race—2:22 pace, stake \$500, best three in five heats.
Bessie Patchen, C. H. Lafferty 1 1 1
Uncle Jim, W. H. Bramwell 2 2 2
Hals Eyer, Edw. H. Farms 3 3 3
Lady Wealth, W. I. Bass 4 4 4
Press Wing, Pressy Thomas 5 5 5
Crystal Louis, M. B. H. 6 6 6
Time, 2:14 1-4, 2:14 1-4, 2:17 1-4.
Second race—2:24 trot, best three in five heats, purse \$300.
Joe Doubles, S. Orlando 1 1 1
Stables, S. Orlando 2 2 2
Storm, C. H. F. Summers 3 3 3
Avon Prince, S. H. L. Uphur 4 4 4
Southern Star, S. H. L. Uphur 5 5 5
Edna E. S. M. R. J. Baldwin 6 6 6
Time, 2:24 3-4, 2:23 3-4, 2:25 1-4.
Third race—one mile trot for three-year-olds, purse \$200, best two in three heats.
Sally Penn, S. H. R. Tyson 1 1 1
Cowdin (120), first; The Royal Prince (129), second; Bud (124), third. Time, 1:18. Sam Barber also ran.
Fourth race—five-eighths of a mile dash, purse \$150—Earl of Richmond (112), first; Macks and Faces (112), second; Sylvia Bell (112), third. Time, 1:01 1-2. Grafta also ran. The rider of Macks and Faces was fined \$10 for pulling up.

Fifth race—one mile, purse \$200—Cowdin (120), first; The Royal Prince (129), second; Bud (124), third. Time, 1:18. Sam Barber also ran.
Sixth race—half-mile, purse \$150—Detect (115) first; Mary Hamilton (115), second; Paton (115), third. Time, 1:11 1-2. Carroll, Ethel Bushy and Friedland also ran.

YOUNG TURKS ACTIVE

Military Party Causes Anxiety Over Balkan Situation.

London, September 25.—The present activity of the Young Turk military party is causing considerable anxiety over the Balkan situation. Recent dispatches from Constantinople state that the Young Turk party is backing an uprising in Thrace against Bulgaria. The Turks are seizing every opportunity to take advantage of the disunion among the Balkan allies. Advice from Athens states that Greece is on the verge of war with Turkey. The opinion prevails in Vienna that Serbia is merely seeking to break the decision of the ambassadors by seizing points not included in the territory of the Young Turk party.

MYSTERY INTENSIFIED

All Kinds of Rumors About Concerning King Manuel's Bride.

[Special Cable to The Times-Dispatch.]
Berlin, September 25.—The mystery surrounding the illness of ex-King Manuel's bride was intensified to-day by official reference that has been made to the fact that she has been suffering from influenza, unofficial statements convey a suggestion that the illness is due to other and more internal diseases. There is even a rumor that the princess's illness is possibly connected with a Portuguese Republican poison plot.

The royal patient has been discharged from the hospital, and is now staying over the week-end at the residence of Friedrich Hohenzollern, in Munich. As soon as she is able to stand the trip, she will be taken to her father's castle, Sigmaringen, for complete convalescence.

How One Booklovers' Contest Ended

Is told you in to-day's contest story. There the number of titles submitted by each of the first ten winners is given, with the number each has correct. It makes interesting reading, for it shows how the winners of one contest worked.

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It consists of seventy-seven pictures, one published each day in this paper, and each picture representing the title of a book. You simply tell what book titles each picture represents, and when all seventy-seven have been published, send in your set of answers. You will find this an easy, simple game, and the rewards are large. And you get all the pictures published to date FREE with the Contest Catalogue and Answer Book.

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FOURTH PRIZE	\$100 IN GOLD
FIFTH PRIZE	\$ 50 IN GOLD
SIXTH PRIZE	\$ 50 IN GOLD
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